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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/727,479

Applicant(s)

KRAUS ET AL.

Examiner

Leynna T. Truvan

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-22 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 9 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7, 8, 10 and 23-34 is/are allowed.
- 6) ☒ Claim(s) 11-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-5, 7-8, and 10-34 are pending.
Claims 6 and 9 are cancelled by applicant.

Allowable Subject Matter

2. Claims 1-5, 7-8, 10, 23-34 are currently amended, thus, have overcome the previous art rejection. Additionally, a further search was performed concludes there is no prior art teaching the claimed invention of claims 1-5, 7-8, 10, are 23-34.

Response to Arguments

3. Applicant's arguments filed 9/29/2008 have been fully considered but they are not persuasive.

Claims 1-5, 7-8, 10, are 23-34 are now in condition for allowance.
Claims 11-22 remains rejected in view of Vanderpool and Cromer combination.

Examiner traverses the argument on pg.15 with regard to claim 11, arguments in the 1st paragraph. Claim 11 does not include similar limitations of claims 1 or 23 which are currently in condition for allowance. One of the reasons are that claim 11 does not recite explicitly what or whom (i.e. device or system) is performing the operations as set forth in claim 11. Additionally, claim 11 does not recite all the operations performed by

a client computing device pertaining to the image of the resource sparing OS. Applicant argues that Vanderpool does not disclose or suggest a client loading in a resource sparing OS image, embedded second image with attributes, and extracting a second hash from the second image. However, claim 11 fails to recite or suggest these limitations.

Applicant also argues that Vanderpool does not suggest comparing information extracted from the embedded catalog file image with information obtained from the resource sparing OS image. Vanderpool suggests creating a first hash of the created image (col.8, lines 4-15) and a second hash of the image from the catalog file where the second image obviously is a stored has that will be used as a reference to during the comparison process (col.8, lines 35-40). Innuendo, Cromer also suggests first and second hash. Thus, the Vanderpool and Cromer combination obviously teaches the claimed invention.

As for arguments regarding Cromer (2nd paragraph), is irrelevant since Cromer is combined with Vanderpool for blocking the use of the image to boot the computing device when the first hash and the second hash do not match. As stated above, claim 11 fails to recite or suggest which type of device or whether client or server is performing the operations of the claimed method. Thus, is not necessary for Vanderpool or Cromer particularly point out the system or device. Therefore, it would have been obvious for a person of ordinary skills in the art to combine the teaching of Vanderpool with Cromer because this ensures the boot process for a computer system

is authenticated to ensure authorized access to an operating system image which avoids booting an incorrect operating system image (Cromer - col.5, lines 55-67).

All dependent claims are also rejected by virtue of the dependency

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderpool, et al. (US 5,781,773), and further in view of Cromer, et al. (US 6,684,326).

As per claim 11:

Vanderpool discloses a method of file system protection for a resource-sparing operating system image, the image including a catalog file embedded therein, comprising:

examining the catalog file and the image to determine if the image is a properly released image; and **(col.11, lines 31-35)**

[blocking use of the image to boot the computing device when the examining determines that the image is not a properly released image]. (see Cromer below - col.5, lines 43-46)

The catalog file can broadly interpret as a list containing specific information (i.e. name, location, or hash algorithm). Vanderpool discloses digital audio and compressed video (image) may also be linked to the data record by listing number and copied to and stored in the subdirectories under a hash algorithm as a function of the listing number. Vanderpool discloses listing or directories of hash algorithms corresponding to a thumbnail image and its filenames reads on the claimed hash of the image from the catalog file. (col.7, line 63 – col.8, line 40). Vanderpool includes hashing of the images extracting a second hash of the image from the catalog file, but did not go further in details of a comparison/matching process. Thus, Vanderpool did not include blocking the use of the image to boot the computing device when the first hash and the second hash do not match.

Cromer discloses a method and system for performing an authenticated boot of a computer system wherein the boot process for a computer system attached to a network is authenticated to ensure authorized access to an operating system image (Cromer - col.1, lines 48-51 and col.5, lines 63-65). Cromer discloses a pre specified list of bootable devices is presented to the user

for selection and a determination of the selected device whether it contains an image of a desired operating system (Cromer - col.5, lines 22-35). Cromer discloses comparing the decrypted received hash to a list of authorized operating system boot record hashes (Cromer - col.5, lines 55-56). Based on the whether the received hash matches an authorized hash, the system then boots or halts appropriately (Cromer - col.5, lines 59-62). The list of authorized operating system boot record hashes is obviously the claimed second hash of the image from the catalog file because as established earlier, the catalog file is merely a listing of specific information. This reads on the claimed second hash of the image from the catalog file and blocking the use of the image to boot the computing device when the first hash and the second hash do not match. Further, Comer discusses hashing the boot record with a hash algorithm and determines if the system boots approves or not whereby a password is requested if the boot records are not approved. If the password is invalid, then the system is halted and if valid, then the system boots (Cromer - col.5, lines 40-47). Cromer includes validation of the first and second hash because Cromer's invention is to authenticate the boot process to ensure authorized access to an operating system image. Thus, avoids booting an incorrect operating system image (Cromer - col.5, lines 63-67). Therefore, discloses the claimed *"blocking use of the image to boot the computing device when the first hash and the second hash do not match"*.

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the teaching of Vanderpool with Cromer because this ensures the boot process for a computer system is authenticated to ensure authorized access to an operating system image which avoids booting an incorrect operating system image (Cromer - col.5, lines 55-67).

As per claim 12: see Cromer on col.11, lines 31-35; discussing method of claim 11, wherein the step of examining is initiated upon a request to update the image, the method further including the step of loading an update image into random access memory (RAM).

As per claim 13: see Cromer on col.5, lines 15-18; discussing method of claim 11, wherein the step of examining is initiated upon a reset of the device.

As per claim 14: see Vanderpool on col.7, line 63 – col.8, line 40 and Cromer on col.5, lines 55-67; discussing method of claim 11, wherein the examining comprises: creating a first hash of the image; extracting a second hash of the image from the catalog file; and comparing the first hash and the second hash, and wherein a mismatch provides an indication that the image is not a properly released image.

As per claim 15: see Cromer on col.5, lines 15-67; discussing method of claim 14, further comprising determining an operational mode of the device.

As per claim 16: see Vanderpool on col.7, line 63 – col.8, line 40 and Cromer on col.1, lines 53-57 and col.5, lines 11-67; discussing the method of claim 11, wherein examining comprises: extracting a signature certification from the catalog file; validating

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the signature certification; and wherein failure of the step of validating the signature certification provides an indication that the image is not a properly released image.

As per claim 17: see Cromer on col.5, lines 55-67; discussing method of claim 16, further comprising the determining an operational mode of the device.

As per claim 18: see Vanderpool on col.7, line 63 – col.8, line 40 and Cromer on col.5, lines 22-35 and 55-67; discussing the method of claim 11, wherein the examining comprises: extracting first make and model attributes from the catalog file; comparing first make and model attributes from the catalog file to second make and model attributes of the device; and wherein a mismatch between the first and the second make and model attributes provides an indication that the image is not a properly released image for the device.

As per claim 19: see Cromer on col.5, lines 15-35; discussing method of claim 18, further comprising the determining an operational mode of the device.

As per claim 20: see Vanderpool on col.11, lines 31-36; discussing method of claim 11, further comprising loading the image into random access memory (RAM) of the device, and wherein the examining is processed after the loading.

As per claim 21: see Cromer on col.3, lines 22-26 and 60-62; discussing method of claim 11, wherein when the step of examining determines that the image is a properly released image, the method further comprising the steps of: erasing a previous image from flash memory of the device; programming the flash memory of the device with the properly released image.

As per claim 22: see Vanderpool on col.7, line 63 – col.8, line 40 and Cromer

on col.1, lines 53-57 and col.5, lines 11-67; discussing the method of claim 11, wherein examining comprises: creating a first hash of the image; extracting a second hash of the image from the catalog file; comparing the first hash and the second hash; extracting a signature certification from the catalog file; validating the signature certification; and extracting first make and model attributes from the catalog file; comparing first make and model attributes from the catalog file to second make and model attributes of the device; and wherein any one of a first mismatch between the first hash and the second hash, a failure of the step of validating the signature certification, and a second mismatch between the first and the second make and model attributes provides an indication that the image is not a properly released image for the device.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leynna T. Truvan whose telephone number is (571) 272-3851. The examiner can normally be reached on Monday - Thursday (7:00 - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. T. T./
Examiner, Art Unit 2435
/Kimyen Vu/
Supervisory Patent Examiner, Art Unit 2435